Embracing the Connected API Economy

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Previous chapters articulated the importance of connecting established financial services players and FinTech firms via Application Programming Interfaces, known as APIs. This chapter will provide details to fully understand the API economy. The connected economy is changing the way businesses innovate. Find out what it means for you and how to join the revolution.

The API Economy: Helping Financial Services Companies to Build Better Products

Markets and industries are changing faster than ever. Disruption takes many forms and businesses must grapple with the "innovator's dilemma": how to set the pace of change without stumbling over the legacy of the past. They need to embrace new technologies wisely to innovate fast at low cost and low risk. Application Program Interfaces (APIs) offer a powerful way to do this.

The Business Value of APIs

An increasing number of companies are using APIs externally to change how they interact with customers and their supply chain. Internally they are using APIs to change how the IT department works with the rest of the business. The key point is that an API platform can change the way IT delivers and the business innovates. But it does not require wholesale changes or five-year transformation programmes. Instead, take the first few easy steps on the journey using the API approach and continue in an agile, iterative way.

The API economy is based around four building blocks: social, mobile, analytics, and cloud. Apps and services can be linked rapidly and cost-effectively to create an extended value proposition. For example, buyers and sellers could be connected via an exchange, where all parts of the value chain come from separate parties and are linked via APIs to facilitate an end-to-end transaction.

The Rise and Rise of APIs

There are already more than 11,000 public APIs and perhaps ten times as many private ones.[1] They make it possible for developers to share services and data easily and to build applications that link to other people's services and data. This is creating new business models and new sources of value for companies. The Internet of Things (IoT), social media, changes in IT delivery, and the desire for multi-channel customer experiences will drive further growth in the API economy.

Everything is Connected to Everything Else

In order to participate in the new digital world, think about your business as one of many neurons that interact with each other in a wider value chain. You cannot expect to own the entirety of a consumer's experience or to participate in all their digital interactions. So the API approach lets you focus on what you do best and connect with others to do the rest.

Getting Started

In the past, if companies spotted a niche or an inefficiency in the market they would need to build all of the technology to create a new product offering. However, using APIs enables them to take their pre-existing intellectual property

[1] http://www.slideshare.net/3scale/progress-in-the-api-economy-april-2014.

and link it to new services, saving time and money and allowing business to create new or extend existing value propositions. Although APIs have been available for many years, it is only the modern APIs that have been designed for today's "plug and play" world.

Simply put, at a very basic level, by simply enabling business to do more rapid prototyping, with low cost and overhead, is a benefit in itself. Traditionally on-boarding developers, creative agencies, or even working with existing partners to do experiments was a long, costly affair leaving businesses frustrated with the lack of agility. Making small changes to the way you partner, design, execute, and orchestrate has big impacts on cost savings and agility. Embracing the API economy is not all about exposing your APIs externally. There are benefits for using the model internally and also clearly applying it with partners. Being ready for when the business model is right and mature enough for your business is part of the winning strategy.

An API platform helps you connect your business processes, services, content, and data to partners, internal teams, and independent developers in an easy and secure way.

In brief, we recommend:

- Introducing the API model in small steps;
- Rapid, agile prototyping, development, and testing using APIs;
- Exploring new approaches to development;
- Renting and using an off-the-shelf API management platform.

This approach maximizes flexibility and innovation while reducing risk and minimizing costs.

Understanding APIs

API stands for application programming interface. It is a way for developers to access services and resources from other pieces of software that they did not write. For example, it is common for web applications to have APIs that let other applications integrate with them. But it is more than mere middleware or just a service gateway.

A company releases its API specifications to the public or chosen third parties so that other developers can design products that work with it. It connects devices, processes, services, and software in a digital ecosystem (see the following Figure).



Figure: APIs everywhere

The Business Value of APIs for the Financial Services Industry

Open or public APIs are the tip of the iceberg; there are many more private APIs than public ones. Fuelled by mobile, cloud, social, big data, and the IoT, the number has grown enormously over the last decade.

APIs offer new ways to differentiate yourself and build a competitive advantage by, for example:

- Integrating content from partners to create opportunities to cross-sell and upsell;
- Creating new lines of business;
- Extending product offerings by using corporate data in new ways;
- Strengthening the brand by providing a consistent, personalized experience across multiple customer touch points;
- Enabling reusability, so new partner integrations are faster;
- Delivering services internally in a more efficient way.

API Business Models

APIs can also make money directly or indirectly. There are various business models to choose from:

- Free. Companies can open up their API to generate new revenue or share information widely. For example, Transport for London's journey planner API or Amazon's Product Advertising API which lets people advertise Amazon products on their own site.

- The API is the product. Companies like Twilio and Stripe sell their services to other app developers exclusively, via an API: internet telephony and instant messaging as a service in the case of Twilio and internet payments for Stripe.

- Developer pays. Some companies sell access to their information via an API, either on a pay-as-you-go model, with transaction fees, or with a monthly or annual fee.

- Developer gets paid. Some companies share revenue with developers. For example, The Guardian shares advertising revenue with developers and Walgreens' QuickPrints API pays a percentage of revenue to app developers who use the company's photo printing service via the API.

- Content acquisition. The content acquisition model gathers valuable data for business use such as feedback, opinion, or content. For example, the Flickr API lets people upload images to the site.

- Content syndication. This makes content available to be published by third parties such as the TripAdvisor API which lets travel websites share user reviews.

Drivers of the API Economy

Over the past 15 years, APIs have flourished everywhere but we do not think that is the end of the story. In fact, we are still in the early days of the API economy. Four things are going to drive its future growth: the IoT, social media, the need to deliver amazing, consistent experiences across multiple customer touch points, and the ambition of progressive IT departments to contribute more directly to the business growth.

- Gartner projects that the total economic value-add from the IoT will be $1.9 trillion by 2020 across many – almost all – industries. Endpoints of the IoT will grow at a 35.2% CAGR from 2013 through 2020, reaching an installed base of 25.0 billion units. In 2020, 8.3 billion "things" will ship, with more than half of them consumer applications. The IoT will support total services spending of about $263 billion in 2020.

- It is a huge opportunity (see the following Figure) and APIs are critical for getting the most out of internet-connected devices and tapping this market opportunity.

- Social media. "Over the next eight years we may recognize that social media is not just another piece of technology that changes the world," but, according to Social3, "a new era very similar to the industrial revolution. While the industrial revolution changed the way we produce (the first half of a business), the social revolution is changing the way we sell, market, service and deliver our solutions

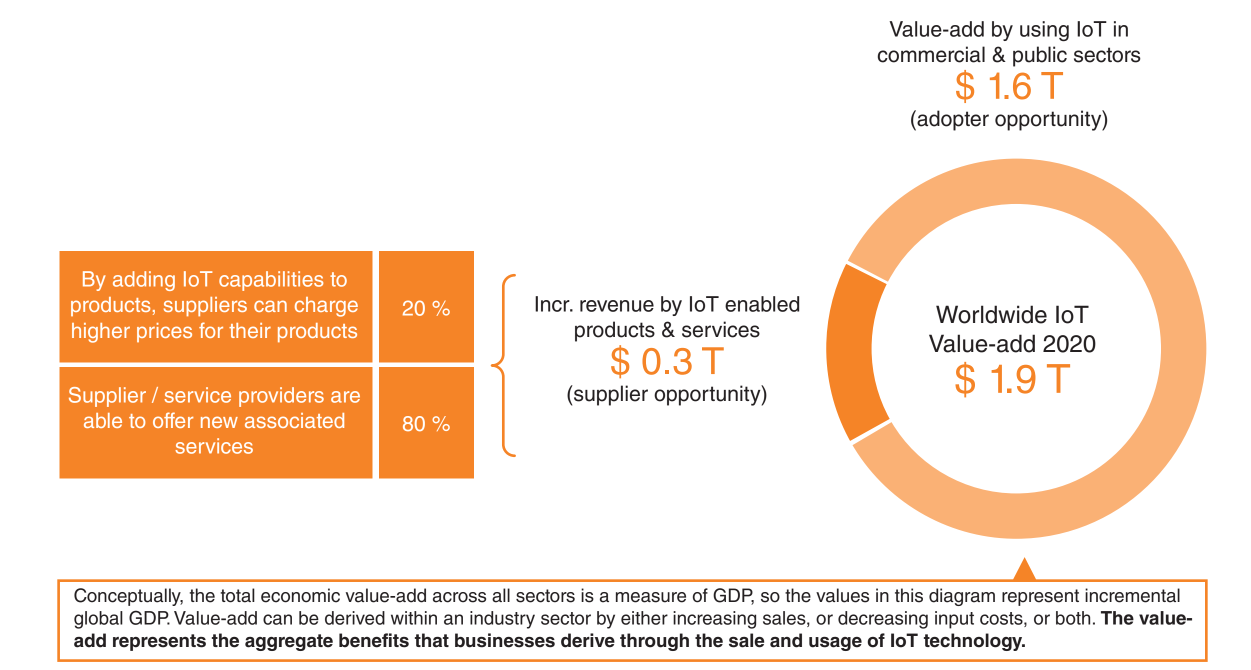


Figure: The graph was created from Gartner's research as quoted above

(the second half of a business)." As this trend continues to grow, companies will use APIs to engage with social media, understand the opportunities, and explore ways to make money from it without damaging their brands.

- Multi-channel customer experiences. Businesses are constantly seeking new ways to engage with customers. For example, retailers already embrace multi- or omni-channel strategies that integrate web, physical stores, and mobile. But with proliferating channels – including internet, mobile, kiosk, stores, branches, digital walls, in-car, games, TV, and more – companies need the agility to exploit new channels quickly and cost-effectively. Imagine being able to deliver a consistent customer and brand experience on a new channel in less than a month.

- The proactive IT department. Consider an IT department that stays in the back room, only doing desktop and server stuff, constantly saying "no" and focusing purely on "keeping the lights on". On the other hand, imagine an IT department that proactively gives business decision-makers new ways to attract, retain, and engage customers or improve business efficiency and agility or reach new customers, markets, and supply chain partners. Which department would you rather lead? If you were CEO, which one would you rather have in your business? APIs are an important tool for transforming IT departments.

How to Join the API Economy: Start Small, Start Now

Companies should embrace APIs in stages over time. If the process is well-orchestrated, every step will create value, thus making the process self-sustaining, manageable, and cost-effective. You do not need a fully-developed strategy for social, apps, or channels. Nor do you need a completely new business model. Take an iterative approach to innovation by experimenting and learning with small, incremental projects. For example:

- Get creative apps and web front-ends built quickly and cheaply.
- Rent and use the platform without fully integrating it.
- Start by exposing a handful of functions for developers to use.
- Leave stubs for future development.
- Try "rent-before-buy-before-build" and "configure-before-customize" approaches.
- Do not invest heavily in infrastructure and in-house resources for this prototyping and rapid development stage.

Do not start with a pre-conceived set of rules or limit your creativity worrying about security, risk, or other constraints. Instead brainstorm all the possibilities and then pick a few low-risk, quick-win possibilities to start with.

Existing Middleware is not the Answer

Most middleware systems do not have the necessary functions to deliver a true API. For example, they often lack a process to on-board developers, an app store, key management, and monitoring tools to report on consumer behaviour and usage.

Dedicated API platforms are designed to get developers up and running quickly, making it easy to:

- Expose data services through well-crafted APIs which are robust and easy to scale;
- Register and on-board developers;
- Submit, review, and approve apps;
- Provide accessibility while protecting the business from threats, back-end overload, and service issues;
- Monitor how people are using the APIs with detailed reporting;
- Get insight into customer behaviours;
- Add features such as news feeds, geo-location, search engine integration;
- Investigate errors and performance problems to improve responsiveness.

The big question is whether you want to rent, build, buy, configure, or customize. The platform which allows you to rent and configure is by far the cheapest and our recommended approach to leverage the API economy in financial services.